

November 23, 2005

EXHIBIT "A"

Dear City Council Members,

I am hoping you can assist us with a problem we have encountered.

Landon Osborne and I (Heidi Daringer) purchased a home at 1840 E street in May of 2005 and we attempted to restore a concrete wall that was falling apart along our alley. Rick Ems of Ems Concrete came out and stated that the wall could not be repaired as the footings were deteriorated and the original bricks (32 inches in length) could not be replaced. This house was built in 1900 and the alley wall looked as if it were put up at that time.

Rick proceeded to meet with Steve Weise with Building and Safety; Rick was given the O.K. to replace the existing brick wall with a new wall in the same spot. As you most likely know, this is not the safest neighborhood and we feel that we need the protection from the dark alley that joins our backyard, we would have liked to have kept the existing structure but it was cracked and not secure. Building of the new wall is nearly complete; a week ago we received a letter from Public Works and Utilities stating that we need to bring the wall in 25 feet from the sidewalk as per code. Landon and I are concerned as this is nearly our entire backyard. As far as we knew, Steve with Building and Safety already approved where the wall has been placed (3 ft in from the sidewalk along the alley) even before the footings had been dug.

Last weekend we met with Shane Dostal the Senior Engineering Specialist with Public Works and Utilities Department and he has stated that the city is willing to make some compromises with us if we bring the wall out to the property line (11 feet from the sidewalk.) We are ok with this if we are not able to leave the structure as it currently is at 3 feet in from the sidewalk.

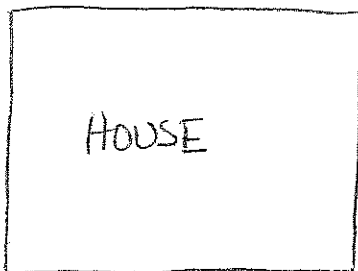
The wall is nearly complete and we want to make sure that there is visibility for pedestrians, but, at the same time, we would like some safety for ourselves as this is a high crime neighborhood and the alley wall offers some protection from the dark alley. Rick Ems did not begin construction on the new wall until after he had received the O.K. from Steve at Building and Safety and now we just want to make sure that this is handled correctly and the homeowner and city can work something out.

When we purchased the home in May it had been vacant for the past five years, overgrowth was abundant and quite honestly, the yard was 'scary,' I can't think of any other way of putting it. I would be pleased to show you the before and after photos of the yard as we have worked very hard on a yard that was once full of bricks, weed trees, old ponds and abundant overgrowth of everything!!! (the pictures will show the transformation - I guarantee it.) All we want is to have a nice home and to feel safe there. We love the area and love the idea of raising children in this area, but we also want to have a sense of security as we are a corner lot along an alley.

We can be reached at home at 477-4531 and my cell # is 503/819-1306,
London's cell # is 402/440-4258. Home email address is heidi90@hotmail.com

Thank you for your time

Heidi Daringer and Landon Osborne



42 ft wrought iron

8 ft brick

8 ft wrought iron

8 ft brick

8 ft wrought iron

8 ft brick

8 ft wrought iron

8 ft brick

8 ft wrought iron

Back wall = 54 ft

total length = 62 ft

Alley

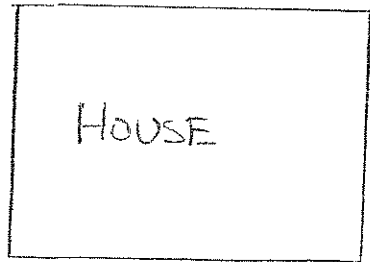
ceiling from

Sidewalk

total length = 64 ft

EXHIBIT "B"

if the situation were this is original plan



HOUSE

42 ft wrought iron link to house

8 ft brick wall

8 ft wrought iron

8 ft brick wall

8 ft wrought iron

8 ft brick wall

8 ft wrought iron

8 ft brick wall

8 ft wrought iron

Back alley wall = 51 ft

51 ft = wall

from sidewalk (60 ft) to garage



Sidewalk

(56 ft in length)

Exhibit "C"

ALLEY

Garage

7'9" Block Pillar
** (Existing to Remain)

30" Block Wall with
Wrought Iron on Top

Existing 6'6" Block Wall to be
reduced in height to 30"
Wrought Iron on Top

30" Block Wall with
Wrought Iron on Top
(Existing Can Remain)

6'2" Block Wall
** (Existing Wall to Remain)

** NOTE: Must be reinforced and
and inspected by Engineer as
per Structural Engineering Report.
Wrought Iron

Property Line

Wrought Iron between wall sections

Distance needed to see Pedestrians on Walk

All plantings within this triangle
maintained at 30" or lower.

19th St.

1840 'E' St.

Exhibit "D"

ALLEY

Garage

7'9" Block Pillar
** (Existing to Remain)

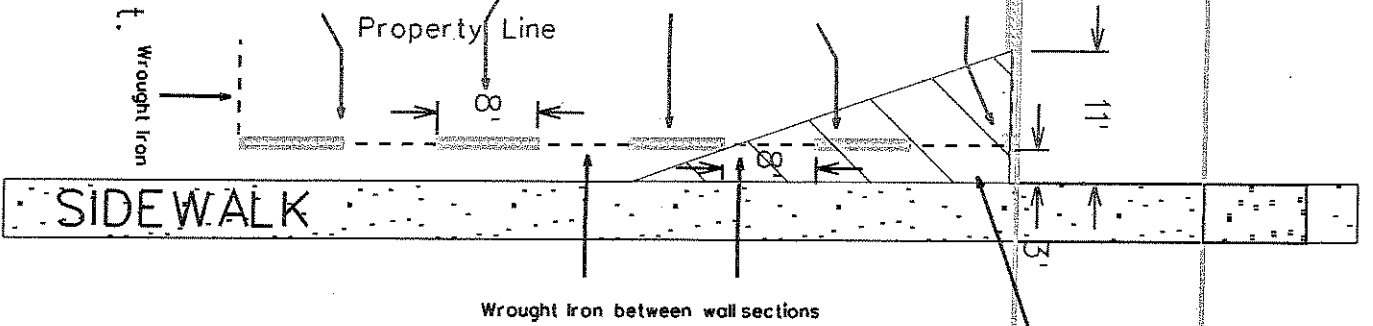
30" Block Wall with
Wrought Iron on Top

6'6" Block Wall
** (Existing Wall to Remain)

30" Block Wall with
Wrought Iron on Top

6'2" Block Wall
** (Existing Wall to Remain)

** NOTE: Must be reinforced and
and inspected by Engineer as
per Structural Engineering Report.



19th St.

1840 'E' St.

King Little
Structural Engineering, P.C.

1301 North 33rd Street
Lincoln, Nebraska 68503-1914
V 402/466-3088
F 402/474-7948
klittle1@neb.rr.com

May 10, 2006

Mr. Landon Osborn
1840 "E" Street
Lincoln, Nebraska 68502

Regarding: Structural engineering inspection and investigation of the three new 8" CMU x 7'-00" tall Screen Walls located at 1840 "E" Street in Lincoln, Nebraska.

KKL No. 28-06

Dear Mr. Osborn:

GENERAL:

On April 27, 2006, I performed the above-mentioned inspection. Present at that time were Mr. & Mrs. Rick Ems (Ems Concrete, builder of the walls) and myself. The purpose of this inspection and subsequent investigation was to determine if the 7'-0" tall 8" CMU Screen Walls meet the local building codes and had sufficient strength to resist the code prescribed wind loads which they will be subjected to.

OBSERVATIONS:

There were three walls which were approximately 7'-0" in height. One wall was on the north side of the property, adjacent to the alley. This wall was approximately 50 foot in length. The other two 7'-0" tall walls were on the east side of the property and were both approximately 8 feet in length. There were also two short walls approximately 2'-4" in height and 8 feet in length. At the northeast corner of the lot a 14" square x 8 foot high CMU pier had been constructed. I interviewed the builder of these walls and pier, Mr. Rick Ems, to attain the information as to how these walls, pier and their footings were constructed. Based upon the information provided by Mr. Ems, the walls were constructed as follows:

1. The masonry blocks used were 8" CMU (Concrete Masonry Units) normal weight with only the ends of the walls grouted full height and 1- #4 rebar in that grouted cell.

Page No. 2 of 3
1840 "E" Street
May 10, 2006

2. The 14" square x 8 foot high CMU pier at the northeast corner of the lot was grouted full up to the tenth course with 1- #4 rebar in that grouted core.
3. The footings were reported as being typically 20"-24" deep x 18"-24" wide. These footings were reported to have 2- #4 rebars placed at mid-height of the footings and running continuously in the longitudinal direction. The concrete used to pour these footings was reported to have a 28-day concrete compressive strength of $f'_c = 2,500$ PSI.

I requested that the size of the footings for these three walls and pier be verified prior to performing my analysis/design check of these walls and their footings. Based upon that inspection, I discovered the following discrepancies in what was reported to be the dimensions of these footings:

1. The footing for the south 7'-0" high wall on the east side of the property is only 11" deep.
2. The footing for the 14" square CMU pier at the northeast corner of the property is only 15.5" deep.

CONCLUSIONS & RECOMMENDATIONS:

Based upon the information gathered at the site, both measured and reported by the contractor, I performed a structural analysis of the 7'-0" high screen walls (Ref. Enclosed Structural Engineering Calculations). My main concern is whether or not these walls and their footings have sufficient strength to withstand the code prescribed 90 MPH (3-second gust) wind load. The results of those calculations demonstrate that these walls do not have sufficient strength or stability to withstand the code wind loads. The footings for these walls were found to be adequate.

Therefore, I recommend the following remedial measures be performed to the three 7'-0" tall CMU walls and the 14" square CMU pier:

1. The three 8" CMU walls require #5 vertical rebars @ 32" o.c., cores grouted full, for the entire length of these walls. Further, these #5 rebars will need to be drilled and epoxy grouted into the top of the footings for an embedment depth of 12" at the north/alley 7'-0" high wall and the north 7'-0" high wall on the east side of the property. Since the footing for the south 7'-0" high wall on the east side of the property is only 11" deep, the embedment depth of these dowels need only be 8" in length. The grout should have a 28-day compressive strength of $f'_c = 3,000$ PSI and the rebars should be ASTM A615, grade $F_y = 60,000$ PSI. I also recommend that #9 gage horizontal joint reinforcing be installed @ 16" o.c. vertically (every other course).

Page No. 3 of 3
1840 "E" Street
May 10, 2006

2. The 14" square CMU pier will need to be replaced with a new 14" square CMU pier. This new CMU pier should be reinforced with 4- #5 vertical rebars in the corners and #3 ties @ 16" o.c. All four of the vertical rebars will also need to be drilled and epoxy grouted into the top of the footing for an embedment depth of 12". The interior core of this pier should be grouted full with grout having a 28-day compressive strength of $f'_c = 3,000$ PSI and the rebars should be ASTM A615, grade $F_y = 60,000$ PSI.

It is extremely important that these remedial measures be performed as specified above. Therefore, I recommend that periodic special inspection of this work be performed by me or another structural engineer. The ability of these walls to resist the design code wind loads is dependant upon the development of the #5 vertical rebars into the top of the footing. Therefore, the installation of the 12" drilling and epoxy grout embedment is absolutely critical to the final safety of these walls.

I would like to make one final comment in regards to the serviceability of these walls and the pier. None of the footings for either the three 8" CMU walls or the 14" square pier had the appropriate code minimum 36" of frost cover to the bottom of the footings. Therefore, at sometime in the future I would expect that some or all of these walls and the pier may experience some degree of upward heave due to the lack of appropriate frost cover. This heave could cause cracking in the masonry mortar joints and possibly the block units themselves. The only way to preclude such movement and distress would be to remove the existing footings and pour new footings to at least the code minimum 36" of depth.

Should you have any questions regarding this report or require further assistance, please contact me.

Yours truly,

King Kuebler Little
5-10-06



King Kuebler Little, P.E.
Nebraska E-4759

Enclosures: Structural Engineering Calculations